

ABSTRACT OF THE DISCLOSURE

Linear polyethylenimine was modified with sterols, such as cholesterol, in three different geometries: linear shaped (L), T-shaped (T), and a combined linear- and T-shaped (LT), to result
5 in linear polyethylenimine-sterol conjugates. These conjugates were mixed with nucleic acids to form complexes for delivery of the nucleic acids into cells. Mammalian cells transfected with these complexes showed protein expression levels higher than linear polyethylenimine alone, and twice that of branched
10 polyethylenimine, but without any significant loss in cell viability. Methods of making these compositions and methods of using them for gene delivery are also described.